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JOINT TEST AND EVALUATION

This instruction implements AFR 99-1, *Test and Evaluation*, by providing guidelines and procedures for Air Force participation or support of Joint Test and Evaluation (JT&E) programs directed by the Office of the Secretary of Defense (OSD). It describes the responsibilities, planning, and execution for JT&E participants. To ensure full understanding of the JT&E process and terminology, users of this instruction should familiarize themselves with Department of Defense (DoD) 5000.3-M-4, *Joint Test and Evaluation Procedures Manual*, August 1988, DoD 7110-1-M, *The Department of Defense Budget Guidance Manual*, May 1990, with Change 1, and *The Joint Test and Evaluation Handbook*. See attachment 1 for a glossary of terms.

SUMMARY OF CHANGES

This is the first publication of AFI 99-106, substantially revising AFR 80-20.

1. JT&E Program Description. The JT&E program is sponsored by the Office of the Secretary of Defense (OSD). The program provides information required by the Congress, OSD, unified and specified commands, and other DoD components. JT&E programs involve two or more military services and may include participation by other DoD agencies or the Joint Chiefs of Staff (JCS). JT&E is not usually directly related to any particular acquisition program or to the acquisition cycle.

1.1. JT&E:

- Evaluates technical or operational performance under realistic conditions of interrelated and interacting weapon systems.
- Evaluates technical and operational concepts.
- Provides information on system requirements and improvements.
- Examines systems' interoperability.
- Develops and analyzes testing methods.

1.2. JT&E tests replicate the actual task as closely as possible. The tests may also tailor scenarios to fit specific requirements; use simulations; or employ laboratories.

1.3. OSD delegates management responsibility for specific JT&E programs to one of the military services or, through the JCS, to a specified or unified command. This lead component or lead service nominates a joint test director (JTD), who manages the program. The lead service and other DoD components furnish resources to support the test.

1.4. The Air Force draws resources for JT&E from the widest possible base to avoid over-committing the resources of any one major command (MAJCOM) or field operating agency (FOA). When feasible, the Air Force recommends conducting JT&Es during JCS exercises.

2. Responsibilities of Test Participants:

2.1. Directorate of Test and Evaluation, HQ USAF/TE:

2.1.1. Serves as the Air Staff office of primary responsibility (OPR) on JT&E programs.

2.1.2. Sets Air Force policy for JT&Es.

2.1.3. Works with OSD on JT&E matters.

2.1.4. Advises OSD about JT&E programs that the Air Force wants to lead.

2.1.5. Reviews and forwards nominations for JTD to the Office of the Director, Test and Evaluation (OSD/DT&E), for each JT&E program that the Air Force leads.

DTIC QUALITY INSPECTED 2

Supersedes AFR 80-20, 22 August 1984.
OPR: HQ AFOTEC/XRJ (Lt Col N. Arrieta)

Certified by: HQ USAF/TEP (Col John T. Manclark)
Pages: 7/Distribution: F

2.1.6. Appoints, with OSD/DT&E coordination, a deputy test director (DTD) for all tests in which the Air Force participates.

2.1.7. Coordinates with the Deputy Chief of Staff, Plans and Operations (HQ USAF/XO), the

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4 November 1997

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Studies and Analyses Agency (AF/SAA), the Air Force Operational Test and Evaluation Center (AFOTEC), and other MAJCOMs or FOAs to:

- Identify critical force effectiveness issues that can be answered through joint testing.
- Develop new concepts and approaches to JT&E (especially computer simulations) that improve testing while reducing resource requirements.
- Review the progress and interaction of joint tests periodically.
- Advise the JT&E community on current force effectiveness studies that affect ongoing or planned JT&Es.

2.1.8. Publishes Air Force test directives for JT&Es.

2.1.9. Chairs the Air Force JT&E Planning Committee.

2.1.10. Is the primary Air Force representative to the OSD JT&E Senior Advisory Council.

2.1.11. Sets Air Force representation on OSD JT&E steering groups and the OSD JT&E Planning Committee.

2.1.12. Reviews and coordinates JT&E documentation, including feasibility studies, test designs, and test plans.

2.1.13. Obtains an Air Force precedence rating for each JT&E according to AFI 16-301, *US Air Force Priority System for Resources Management* (formerly AFR 27-1).

2.1.14. Validates requests for Air Force personnel (Air Force Elements (AFELM), 3V Command designator) assigned permanent change of station (PCS) to a JTD's staff forwarded by AFOTEC and submits them to HQ USAF/PE for consideration.

2.1.15. Reviews and comments on JT&E final reports.

2.1.16. Determines with the AFOTEC and appropriate MAJCOMs and FOAs:

- JT&E nominations to be forwarded to OSD.
- Air Force positions on JT&E program issues and normal JT&E documentation.
- Continuing Air Force needs for test resources acquired by OSD during a JT&E.
- Air Force position in negotiations with OSD to keep desired resources.
- When to start disposition actions to allow time to plan support operations and maintenance.

2.2. **Directorate of Programs and Evaluation, HQ USAF/PE:**

- Coordinates on and processes personnel assigned to a joint test force (JTF) with HQ USAF/TE.
- Guides Air Force District of Washington (AFDW) on JTF personnel authorizations.

2.3. **AFDW:**

- Pays administrative costs for Air Force personnel assigned to AFELM 3V on the JTD staff when the Air Force is executive agent.
- Manages and administers MAJCOM-level personnel programs, data systems, action systems management, and special support for Air Force military personnel assigned to JT&E programs in AFELM 3V billets.

- Manages AFELM 3V manpower resources assigned to JT&E programs.
- Provides MAJCOM-level manpower support to the AFELM in JT&E programs.
- Develops, coordinates, and is MAJCOM final approval authority for intra- and interservice support agreements and memoranda of understanding that support USAF personnel in AFELM assigned to JT&E programs.
- Does *not* program or budget for HQ USAF/TE or AFOTEC requirements for JT&E.

2.4. **HQ Air Force Operational Test and Evaluation Center (AFOTEC):**

2.4.1. Helps HQ USAF/TE review and comment on JT&E nominations from the MAJCOMs, FOAs, and other DoD agencies.

2.4.2. Is the Air Force planning OPR and primary point of contact for OSD support agents during feasibility studies and test design development.

2.4.3. Sends representatives to OSD JT&E steering groups.

2.4.4. Reviews and refines Air Force JT&E requirements and objectives for feasibility studies, test designs, and test plans.

2.4.5. Coordinates with HQ USAF/TE on JT&E matters.

2.4.6. Sends nominations for the Air Force JTD and DTD to HQ USAF/TE.

2.4.7. Drafts the Air Force JT&E test directives and forwards them to HQ USAF/TE.

2.4.8. Initially validates and sends requests for personnel for JT&E programs to HQ USAF/TE.

2.4.9. Works with the Air Force and other participating services to estimate the total resources required to support a specific JT&E program.

- Develops a JT&E-consolidated resource estimate.
- Publishes an initial draft JT&E test resource plan (TRP) after receiving the JT&E program charter.
- Publishes subsequent TRPs when significant changes occur or twice a year.

2.4.10. Guides management for the Air Force portion of JT&E to the Air Force JTDs and DTDs.

- Helps the JTD organize a staff when Air Force is the lead service.
- Supports Air Force DTDs to help resolve test and Air Force administrative issues.
- Advises HQ USAF/TE about test progress, significant actions, and potential problems.
- Reviews and comments on test plans, test reports, and analyses.

2.5. **MAJCOM or FOA:**

2.5.1. Establishes a permanent point of contact for JT&E matters.

2.5.2. Forwards JT&E nominations to HQ USAF/TE and HQ AFOTEC/XRJ and helps make the selection for forwarding to OSD.

2.5.3. Nominates individuals for the Air Force JTD and DTD when requested by HQ USAF/TE or HQ AFOTEC.

2.5.4. Provides project officers to assist in the feasibility, test design, and test planning phases of the JT&E process.

2.5.5. Gives estimates of JT&E resource requirements to HQ AFOTEC and coordinates HQ AFOTEC-developed TRPs. Allocates the test resources and funds to support JT&Es identified in TRPs.

2.5.6. Provides personnel and equipment according to Air Force test directives and approved TRPs.

2.5.7. Helps HQ USAF/TE figure the continuing Air Force needs for resources acquired by OSD during a JT&E.

2.5.8. Reviews and refines Air Force JT&E requirements and objectives for the feasibility studies, test designs, and test plans.

2.5.9. Advises HQ USAF/TE about test progress, significant actions, and potential problems.

2.6. Air Force Deputy Test Director (DTD):

2.6.1. When the Air Force is the lead service, the JTD has the responsibilities listed in 2.6.2 and can delegate them to the Air Force DTD.

2.6.2. When the Air Force is not the lead service, the Air Force DTD:

- Acts as the senior Air Force representative to the joint test.
- Advises the JTD on how to apply Air Force tactics, doctrine, and capabilities.
- Ensures the adequacy and availability of Air Force test support forces and resources. Coordinates scheduling with participating MAJCOM and FOAs and keeps HQ AFOTEC and HQ USAF/TE up to date. (A test directive with a coordinated TRP and appropriate budget authorizes the DTD.)
- Informs the Commander, HQ AFOTEC, of test progress, significant actions, and potential problems.
- Sends formal comments, recommendations, or requests for determination or interpretation of policy to the Commander, HQ AFOTEC.
- Ensures that test planning, execution, and test reports address Air Force interests.
- Informs HQ AFOTEC of test costs that must be negotiated with OSD.
- Works with HQ AFOTEC/XRJ on all Air Force administrative funding and budget requests, whether annual or supplemental.
- Provides HQ AFOTEC and involved MAJCOM or FOA with major program documentation.
- Helps HQ AFOTEC dispose of Air Force-acquired assets.
- Provides authority to Air Force elements that support the joint test.

3. Planning a JT&E Program:

3.1. **Submitting a JT&E Nomination.** A JT&E nomination may originate within any Service or other DoD

elements. The Air Force submits nominations to HQ USAF/TE and HQ AFOTEC/XRJ, using the format shown in attachment 2.

3.2. **Selecting a JT&E Program.** The Air Force JT&E Planning Committee recommends and HQ USAF/TE selects the nominations that go to OSD.

3.2.1. Each DoD component and the JCS participate in selecting JT&E programs by their OSD JT&E Planning Committee and Senior Advisory Council membership. HQ USAF/TE or HQ AFOTEC/CC (by agreement) represents the Air Force on the Senior Advisory Council.

3.2.2. The OSD/DT&E and OSD/DOT&E:

- Screen all JT&E nominations.
- Consider the recommendations of the JT&E Planning Committee and Senior Advisory Council.
- Select the nominations that get feasibility studies.

3.3. Developing the Joint Feasibility Study (JFS):

3.3.1. When directed and personnel are available, the JFS team develops an approach for the study and gets approval from OSD/DT&E. The presentation is typically a briefing on the tasks the JFS team plans to perform for the study.

3.3.2. The JFS's main purpose is to provide the decision makers with the information they need to decide whether to charter a joint test. The JFS examines selected issues and program objectives in enough detail to resolve two crucial questions:

- Is the joint test program necessary?
- Is a joint test program feasible?

3.4. **Developing the JT&E Resource Requirements.** The feasibility study produces an initial estimate of the resources required for the test.

3.4.1. The lead service documents and consolidates the resource requirements for all services in the JT&E-consolidated resource estimate.

3.4.2. The participating MAJCOMs, FOAs, and HQ USAF/TE work together to write the draft TRP, which becomes a resource planning document for each participant.

3.4.3. MAJCOMs and FOAs that support a joint test provide the resources in TRPs.

3.5. **Publishing the Test Directive.** The test directive identifies the resources and responsibilities of the test participants.

3.5.1. HQ AFOTEC drafts the test directive, and HQ USAF/TE approves and publishes it.

3.5.2. The test directive with the TRP, test plan, and budget authorizations is the tasking authority for the Air Force.

3.6. **Developing the Test Plan.** The JTD develops the test plan, including resources; schedules data collection, reduction, and analysis; test concept; test objectives; and a list of reporting requirements. The participating services, MAJCOMs, and FOAs coordinate the plan and get OSD's approval.

4. Executing the JT&E:

4.1. **Issuing the JT&E Charter.** After selecting a JT&E for execution, OSD issues a charter for the test. The

charter specifies the lead service and outlines the duties, authorities, and reporting channels of the JTD. The charter is a contract for test support among the OSD, the JTD, and the service.

4.2. Forming the Joint Test Director's Staff. After OSD issues the charter:

- The lead service nominates the JTD and a DTD.
- Each service appoints a DTD.

4.2.1. The participating services fill positions on the JTD staff based on the JT&E-consolidated resource estimate. As a rule, this staff occupies PCS billets.

4.2.2. HQ USAF/PEP validates and allocates the Air Force's manpower authorizations, which the AFELM 3V implements.

4.3. Command Relationships. Administer the JT&E according to the procedures of the lead service.

4.3.1. Administer personnel ratings, award arrangements, and policies on a case by case basis unless a standing memorandum of agreement covers the situation.

4.3.2. The JTD:

- Reports to OSD about how the test schedule is being met.
- Manages the test resources.

4.3.3. The Air Force DTD:

- Reports to the JTD for day-by-day test management.
- Is responsible to the Air Force (see paragraph 2.6).

4.3.4. HQ AFOTEC helps the Air Force DTD and JTD to resolve test issues.

4.3.5. Air Force test support forces support the Joint Test Force (JTF). The Air Force DTD is the JTF point of contact for Air Force test support force tasking. If the relationship between the support forces and the Air Force DTD is different from that stated in this instruction, formalize the responsibilities before testing starts.

4.4. Forming the JTF. The JTF has two elements: the JTD staff and the test support force. The test support force includes individuals, units, and equipment to conduct the test. The test support force is not assigned to the JTD staff but supports the staff as specified in the test directive. The JTD forms JTF according to specific guidelines in the joint test plan, TRPs, and service test directives.

4.5. JT&E Funding. OSD, the services, and any JCS or DoD agencies involved in the test share the funding requirements for JT&E. OSD bears any unique costs of the test.

4.5.1. As outlined in DoD budget guidance, DoD Manual 7110-1-M, test-unique fees include costs for:

- Feasibility studies of proposed joint tests.
- Test design and planning support for joint tests.
- Developing, procuring, installing, and operating special instruments.
- Transportation, travel, and per diem for the JTD staff.
- Modifying test articles to obtain test data.
- Collecting, reducing, and analyzing data.
- Test reporting services.
- Transporting test support equipment to and from the test site.
- Contractor support for the JTD staff.
- Industrial or test and evaluation resources, such as using special airlift aircraft, or major ranges and test facilities.
- Test-unique training for Red and White force players not generally available in the Air Force and JTD staff training.

4.5.2. The lead service funds administrative support for the JTD and staff.

4.5.2.1. Established command procedures guide the budgeting support costs for participating MAJCOMs and FOAs in these areas: operations, maintenance, procurement, research, development, test, and evaluation.

4.5.2.2. Examples of command costs are:

- Personnel travel and per diem.
- Flying hours.
- Fuel.
- Munitions.

4.5.3. When existing guidelines do not cover other costs (including facility costs), OSD and the services negotiate the items.

4.6. Disposing of Test Resources:

4.6.1. The services and OSD negotiate disposing of test resources that were acquired using OSD funds.

4.6.2. HQ AFOTEC disposes of test resources that were acquired using Air Force funds at the end of test.

4.7. Authorizing Direct Communications. Test participants may communicate directly to plan and conduct the test. **EXCEPTIONS:**

- Air Force test participants must go through HQ AFOTEC channels to HQ USAF/TE to negotiate doctrine or policy.
- Test participants (except the JTD) should not, communicate directly with OSD. A participant who must communicate directly with OSD to avoid disrupting the test, must inform the JTD, HQ USAF/TE, and HQ AFOTEC immediately.

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Director of Test and Evaluation

2 Attachments

1. Glossary of Terms

2. Format for the Joint Test and Evaluation Nomination

GLOSSARY OF TERMS

Air Force JT&E Test Resource Plan (TRP). A detailed resource document specifying resources to support a JT&E program. MAJCOMs and FOAs use the TRP to plan their participation.

Air Force JT&E Planning Committee. A committee chaired by HQ USAF/TE that includes representatives from HQ USAF/XO, HQ AFOTEC, MAJCOMs, and FOAs. The committee reviews JT&E nominations from all sources and recommends the nominations that go to OSD/DT&E.

Air Force Test Directive. Identifies the responsibilities of all Air Force participants and directs compliance with more specific tasks specified in the TRP, test design, and test plan.

Joint Test Director (JTD). The individual responsible to OSD for developing JT&E test plans, conducting the test, and developing required JT&E reports. The lead service nominates the JTD. OSD approves the nomination.

Joint Test Director's Staff. Personnel assigned on PCS or TDY to run a JT&E.

Joint Test Force (JTF). The total force supporting a test, including the JTD staff and test support forces. JTF size varies, depending on the test activity.

Lead Service. The service designated by the Secretary of Defense to conduct a JT&E program.

OSD JT&E Planning Committee. A working-level committee chaired by OSD, including representatives from each service, JCS, and selected OSD offices. The

committee sets agendas and reviews issues and JT&E nominations for the Senior Advisory Council. HQ USAF/TE and HQ AFOTEC appoint voting members for the Air Force.

Senior Advisory Council (SAC). A general officer or executive level (OSD/ DT&E or DOT&E) advisory council for JT&E issues such as selection of JT&E nominees. HQ USAF/TE or HQ AFOTEC/CC is the Air Force's primary member.

Test Design. The design, prepared by JTD staff, that follows up the feasibility study. The test design should contain enough detail on objectives, resources, and schedules to give each service realistic guidelines for resource planning and allow the JTD to prepare a test plan.

Test Feasibility Study. A study by the services when selected by the OSD to determine if the test is required and can meet the objectives and to provide an estimate of required resources.

Test Plan. A planning document used with the test directive to provide detailed guidelines for executing the JT&E. The JTD produces the plan and coordinates it with the participating services. OSD approves it.

Test Support Force. Personnel and equipment supplied by the DTD of each participating service. The test support forces act as player forces during a test. The test support force may include tactical units, operating organizations, and their support organizations. The normal chain of command of test support force elements remains in effect during a JT&E.

FORMAT FOR THE JOINT TEST AND EVALUATION NOMINATION

1. Test title.
2. Test issues and objectives that the JT&E addresses and the value and effect of the JT&E if it meets its objectives.
3. Anticipated users of the JT&E results.
4. Projected JT&E program schedule milestones.
5. Unique requirements of the JT&E, including hardware, software, personnel, environment, and instrumentation.
6. Suggested participants (by Service, CINC, or major command). Identify lead and participating services.
7. Outline of the test concept.
8. Milestones in the Joint Feasibility Study Plan.
9. Estimate of funds (service and OSD) and resources (personnel, facilities, and so on) by fiscal year.
10. Known and projected shortfalls of resources.
11. Agencies and Organizations. CINCs supporting the nomination. Participating groups should coordinate support before the nomination.
12. Point of contact. Include the name of the Joint Feasibility Study Directors' nominee, as well as a phone and FAX number, if possible.